REMARKS/ARGUMENTS

I. Status of Claims

Claims 1-12 are pending of which claims 1 and 7 are independent. Claims 1 and 7 have been amended. Applicants note with appreciation that claims 2-6 and 8-12 are indicated as indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

II. Rejections under 35 U.S.C. §102(b)

Claims 1 and 7 are rejected under 35 U.S.C. §102 as being anticipated by U.S. Patent No. 7,054,461, to Zeller et al. (hereinafter Zeller). Applicants respectfully traverse the rejection.

Before discussing the differences between the cited reference and the present application, it is beneficial to give a brief overview of Applicants' disclosure. When an object is defocused or irregularly illuminated during photographing, the photographed image can become blurred. A blurred image can cause an increase in the rate of misrecognition when attempting to recognize characters in the image. Hence, it is desirable to determine whether or not an image is blurred before undertaking efforts to recognize characters in the image.

The present application is directed to a device and method for determining whether an image is blurred prior to recognizing characters in the image. Claim 1 recites a device for determining whether or not an image is blurred. The device comprises:

> an input part for receiving an image;
>
> a block classification part for dividing the received image into blocks and classifying the divided blocks into character blocks and background blocks;
>
> a character block energy calculation part for calculating an average energy ratio of the character blocks; and
>
> a blurring detection part for determining whether or not the image is blurred based on a comparison of the average energy ratio with a predetermined threshold.
> (emphasis added)

Unlike the claimed invention, which is directed to a device for determining whether an image is burred, the cited reference Zeller, however, is directed to a different system for authenticating printed objects. See abstract and col. 2, lines 21-23. Specifically, Zeller's system is designed to detect counterfeit printed object by using information-based metrics along with print quality metrics. According to Zeller, conventionally, message symbols extracted from digital watermarks embedded in a printed image are used to determine an information-based metric based on accuracy of the symbols. The derived information-based metric is then employed to detect whether the printed image is a counterfeit or not. See col. 1:59 - col. 2:19. Zeller's system, nonetheless, improves the prior art by incorporating additional print quality metrics in the authentication process.

Zeller, however, does not disclose, teach, or suggest the claimed subject. Specifically, Zeller does not disclose, teach, or suggest any of the block classification part, the character block energy calculation part and the blurring detection part recited in claim 1. First, Zeller does not disclose, teach, or suggest the block classification part as recited in claim 1. The Examiner cited col. 7, lines 44-49 as disclosing the block classification part for dividing the received image into blocks and classifying the divided blocks into character blocks and background blocks, as recited in claim 1. The cited text, however, has little to do with dividing an image into blocks and classifying the divided blocks into character blocks and background blocks. The cited text merely discloses that a histogram of the gray levels in a bar code portion of an image can be used for finding peaks and deriving contrast from the relative peak locations. The contrast measurement, however, is then disclosed to be used for setting a threshold for an information-based metric based on the recovery of a digital watermark payload. See col. 2, lines 44-67. None of the disclosure, however, touches upon the claimed block classification part. To be more specific, in the cited text, no division of an image into blocks is disclosed, and no classification of the divided blocks into character blocks and background blocks is discussed. Accordingly, the cited text does not disclose, teach, or suggest a block classification part for dividing

the received image into blocks and classifying the divided blocks into character blocks and background blocks, as recited in claim 1.

Furthermore, Zeller fails to disclose, teach, or suggest a character block energy calculation part for calculating an average energy ratio of the character blocks as claimed. The Examiner cited the contents in Table 1 of col. 13 as disclosing the claimed character block energy calculation part. The contents cited, however, merely discloses that metrics, such as "ratio of energy in mid frequencies to total energy", "ratio of energy in wavelet sub-band to total energy in wavelet level", "mean less" and "median less", can be used for determining blurring metrics, which can be measurement of print quality. See col. 12, lines 40-55, col. 24, lines 34-45 and Table 1 on col. 13. Applicants have carefully read each of their descriptions, and respectfully submit that none of the cited metrics, however, are disclosed as **an average energy ratio of the character blocks**, as claimed. In fact, as indicated in Zeller, the cited metrics are invariably derived from **dividing total energy of a subject image as a whole**. See col. 11, lines 41-46, col. 24, lines 3-7 and the descriptions of the cited metrics in Table 1. In essence, there is absolutely no consideration given to an **individual** character block concerning its energy ratio during any of such derivations. Consequently, the cited metrics cannot be **an average energy ratio of the character blocks**, as claimed. Accordingly, the cited metrics does not disclose, teach, or suggest a character block energy calculation part for calculating an average energy ratio of the character blocks, as claimed

Finally, because Zeller does not disclose, teach, or suggest calculating an average energy ratio of the character blocks, it cannot disclose, teach, or suggest a blurring detection part for determining whether or not the image is blurred based on a comparison of the average energy ratio with a predetermined threshold, as claimed.

Accordingly, Zeller fails to disclose, teach, or suggest any of the block classification part, the character block energy calculation part and the blurring detection part recited in claim 1. Accordingly, Zeller fails to disclose, teach, or suggest the subject matter recited in claim 1. Reconsideration and withdrawal of the rejection of claim 1 is therefore respectfully requested.

Method claim 7 contains substantially similar recitations to those of claim 1 concerning the functional limitations of the block classification part, the character block energy calculation part and the blurring detection part recited in claim 1. Accordingly, claim 7 is also believed to be allowable for at least the same reason stated above in connection with claim 1. Accordingly, reconsideration and withdrawal of the rejection of claim 7 is respectfully requested.

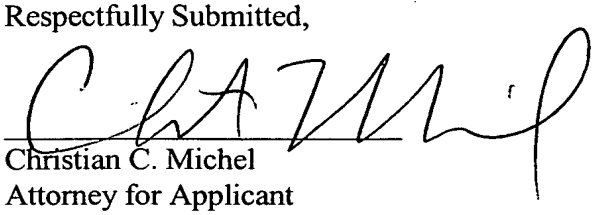
III. Allowable Subject Matter

Applicants thank the Examiner for allowing the subject matter recited in claims 2-6 and 8-12 while objecting the claims for their current dependent form. In view of the above stated remarks and arguments stated in connection with the rejection of claims 1 and 7, Applicants believe that claims 2-6 and 8-12 are in condition for allowance in their current dependent form by virtue of their dependence from claims 1 and 7, respectively. Accordingly, Applicants respectfully hold amending these claims into dependent form in abeyance until the Examiner has had an opportunity to consider the above comments.

IV. Conclusion

In view of the above, it is believed that the application is in condition for allowance and notice to this effect is respectfully requested. Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the telephone number indicated below.

Respectfully Submitted,



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